

II. LINGUISTICS

II. ЛИНГВИСТИКА

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LINGUISTIC AND COGNITIVE TRANSLATION MODELS: COMPARATIVE ANALYSIS

Abstract: Translation models are very important for both applied and theoretical linguistics. Although the conceptually complex multidimensional nature of translation process is taken into consideration during its modelling, all known translation models consider this process only from this or that angle. This article deals with the major models proposed within the linguistic and cognitive approaches to the translation studies. The conclusion, based on the comparative table, suggests using several models at once and creating a new integral approach to translation process modelling.

Key words: translation model, linguistic translation models, cognitive translation models, integrated translation model, translation modelling.

Nowadays, description of the translating process, i.e. actions performed by the translator while rendering the source text (ST) into another language, is one of the major tasks of the translation theory. As a result, a **translation model** is created, that is «a description of a number of mental operations, which can enable a translator to render the whole ST or its part into another language» [2].

Several translation models have been proposed within various theories, methods and approaches to translation. The most famous translation models in linguistics are transformational, semantic and situational (or denotational) ones.

Transformational model of translation stems from the N.

Chomsky's «generative grammar», according to which there are deep and surface structures in a language. The former shape the meaning and the latter give it a phonetic form. Thus, the sentence structure is considered to be a translation unit. There are **three stages** of translation process: 1) analysis – surface structures of the source language (SL) are transformed into deep structures of the SL; 2) translation proper – deep structures of the SL are translated into deep structures of the target language (TL); 3) synthesis – deep structures of the TL are transformed into surface structures of the TL.

First and foremost, transformational model applies to the analysis of SL complex syntax structures in order to understand the message correctly (the first stage). However, at the second stage this model does not possess sufficient explanatory power: the equivalent deep structures create a logic-syntax frame, where semantic meaning of the units should be added, the communicative situation having been taken into consideration. Moreover, transformational model does not allow to explain why, for example, “Fragile” is equal to «Осторожно, стекло» and «You’re welcome» is equal to «Не за что».

Semantic model of translation is based on the idea of the componential analysis, i. e. the possibility to divide the semantic meaning into small parts – semes, which are thought to be translation units (Table 1).

Table 1 - Semantic model

STU	→	STU (a, b, c, d, e, f)	→	a, e, f	→	TTU (a, e, f, ...)
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ST units (STU) are divided into semes (a, b, c, d, e, f), among which some are of greater importance (a, e, f). The translator then has to find such units in the TL (TTU – target text units), so that they would bear the same meaning. Semes of much less importance (b, c, d) can be omitted in the translation due to the existing differences between the language systems. However, the results of the componential analysis prove that even half of the set of semes would be enough for achieving the equivalent text in the TL [1, p. 141–142]. The equivalent contents of both texts mean the identity or close similarity of all or some semes, composing the content of these texts. Thus, the most interesting part of this model is the idea of identification and transformation of the most important semes of the ST.

Situational (or denotational) **model** rises from the linguistic

propositions on the link between the language and the world. One and the same situation can be described by means of both the SL and TL. But each language does it in its own way. So, the translation process is no more the interlingual transformation, but understanding the situation in the SL and expressing it in the TL. Understanding the ST, the translator determines its content, shaping in their mind a model of the situation to be described, and then expresses the idea in the target text (TT) by the means of the TL. Within this model, a word is considered to be a translation unit. As a matter of fact, this model of translation is used for attaining the equivalent on the situation level. It is the situation that determines the translation equivalent among the variables, e.g. «instant coffee» is equivalent to «растворимый кофе» but not «мгновенный кофе».

Let us look at some translation models proposed by linguists within the cognitive approach to translation.

The concept of mental models (R. Bell, E. Gutt) implies that the processes of understanding and conclusion are conditional on the so called mental models serving as representations in the mind of real or imaginary situations. During the process of translation, the ST exists only in a cognitive form, and the process itself progresses in both short- and long-term memory by means of decoding the ST and coding the TT through the mental representation of the ST. Mental representation contains three kinds of information – syntactic, semantic, and pragmatic, which form three stages of the translation process, respectively. Being influenced by the context, mental representations become thoughts with propositional forms, which, in their turn, have certain logical properties. It should be noticed that two propositional forms may have some logical properties in common. Accordingly, mental representations, whose propositional forms share logical properties, resemble each other. Such resemblance is called «interpretative resemblance» [4]. Thus, translation is understood as interlingual interpretation, which results in the interpretative resemblance of the TT with the ST.

A famous German linguist Wolfram Wilss [5] proposed his concept, according to which translation goes through three stages: preparation, formulation, and evaluation of the translation. The whole process is a set of well-considered actions, performing which the translator always faces the choice, speculates on the consequences of this choice, and makes decisions to achieve the result. At the preparation stage the translator conducts three kinds of searching: random, systematic, and heuristic (the

one which intuitively shortens the searching process). As a result of such searching, the translator creates a certain mental scheme, which helps to gradually solve the problems. While translating, the translator uses different types of mental operations: reflective and impulsive (intuitive), from the point of which the translation process should be regarded as a problem-solving operation.

In 2008, A. Minchenkov developed a **cognitive-heuristic model** of translation, where translation is understood as a «heuristic process of objectification (by means of the target language) of mental structures formed in the mind on the basis of the ST» [3]. A concept («discrete unit of thought» [3]) is taken as a translation unit and characterized as constant. During translation, the ST is not transformed, but is used as a source of actualization of certain concepts. Interacting with each other, as well as with the background knowledge and the knowledge of the context, such concepts turn into meanings, which form a certain meaningful structure in the mind. It is not a problem when a concept fully or partially coincides with the one forming the meaning of the word in the TL. When it does not happen, the translator has to conduct mental operations with concepts, combining them in different ways. At this stage, the language of thought is used, which is much wider than a natural one, so its possibilities are endless. There are two compulsory stages of translation (forming a conceptual structure and its objectification), and two optional (cognitive search and auto-correction). Thus, the effectiveness of the ST comprehension depends on how well the translator knows the link between a unit of the ST and a concept typical to native speakers. Therefore, it is crucial for the translator to gain relevant knowledge about SL concepts.

The data collected while studying linguistic and cognitive models of translation have been analysed and organised in Table 2. It shows that the translation unit is defined differently within each of the 6 translation models proving their lop-sided character. As for the number of translation stages, the majority of linguists distinguish three of them, thus, a new integral model with three translation stages can be speculated on.

Table 2 - Linguistic and cognitive models of translation

Criteria		T. unit	T. stages	Strength	Weakness
T. models					
Linguist	Transfor- mational	sentence structure	1) structural analysis 2) translation proper 3) synthesis	reveals different types of translation transformations	does not possess sufficient explanatory power
	Semantic	seme	1) semantic analysis	proves the	does not explain the cases

			2) identifying the main semes 3) finding equivalents in TL	translator's choice	of using different semantic categories
	Situation- al	word	1) analysis of the ST 2) imaging the situation 3) description the situation in TL	has sufficient explanatory power	does not help to choose lexico-syntactical arrangement of a phrase in TL
Cognitive models of translation	Concept of mental models	mental model	1) decoding 2) mental representation 3) coding	helps to make the TT as close to the ST as possible in terms of its mental comprehension	fails to translate if the mental models of the translator do not coincide with the ones of the members of communication
	W. Wilss's concept	text	1) preparation 2) formulation 3) evaluation of the translation	does not limit the translator in translation variants	does not allow to unequivocally evaluate the TT because of a great personal element
	Cognitive- heuristic	concept	1) forming a conceptual structure 2) its objectification in TL a) cognitive search b) auto-correction	allows to combine concepts, and thus prevents "non- translatability" of the ST	while recombining the concepts, the translator risks to lose significant information

Having analysed the main strengths and weaknesses of these models, we can conclude that the flaws of one model are supplemented by the advantages of another. It becomes obvious that only integrating them we can get a product of the highest quality. So, it seems to be necessary to work out a new modern integral approach to the translation modelling.

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ЛИНГВИСТИЧЕСКИЕ И КОГНИТИВНЫЕ МОДЕЛИ ПЕРЕВОДА: СОПОСТАВИТЕЛЬНЫЙ АНАЛИЗ

Аннотация: модели перевода имеют большое значение как для прикладной лингвистики (совершенствование лингвистических технологий), так и для теоретической, поскольку перевод есть одна из высших форм интеллектуальной деятельности человека. Хотя при

моделировании процесса перевода и учитывается его концептуально-сложный, многоаспектный характер, тем не менее, все известные на сегодняшний день модели перевода представляют лишь ту или иную его грань, но не отражают весь процесс перевода в целом. В статье описываются основные модели, выдвигаемые в рамках лингвистической теории перевода и когнитивного подхода к переводоведению. В заключение приводится сопоставительная таблица, на основании которой делается вывод о нецелесообразности использования какой-то одной модели в процессе перевода и о необходимости разработки теоретических основ нового, современного интегрального подхода к моделированию процесса перевода.

Ключевые слова: модель перевода, лингвистические модели перевода, когнитивные модели перевода, интегрированная модель перевода, моделирование перевода.

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